

N° 696



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COMPLETE SPECIFICATION.

**Improved Means applicable for Use in the Distribution of Steam for Heating Purposes.**

We, JULES GROUVELLE and HENRI ARQUEMBOURG, trading as La Société Jules Grouvelle et H. Arquembourg, of 71, Rue du Moulin-Vert, Paris, in the French Republic, Manufacturers, do hereby declare the nature of this invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:—

This invention relates to means applicable for use in the distribution of steam for heating purposes, and has special reference to the construction of a cock, or controlling device, for regulating the supply of steam to each heating coil, or equivalent apparatus, with the object of preventing any such apparatus receiving more steam at a predetermined constant pressure than it is capable of condensing in the coldest weather to be anticipated; the device being at the same time both simple and reliable.

Referring to the accompanying drawings, Fig. 1 is a vertical section of a cock constructed according to our invention, Figs. 2 and 3 being respectively a side elevation and a plan of one of the parts hereinafter more particularly referred to.

Within the partitioned casing A is screwed, upon a suitable seating, a plug  $a$ , of reduced orifice (shown detached in Figs. 2 and 3) formed with a central perforation,  $a^1$ , partly of cylindrical shape and partly in the form of a truncated cone, while the upper surface of the said plug  $a$  is provided with a notch  $a^2$ , wherein a tool may be readily engaged, when it is desired, either to fit the plug in position or to remove it. The plug  $a$  is one of a series of such plugs all interchangeable, and in which the angle at the apex of the cone pertaining to the truncated portion of the central perforation,  $a^1$ , is constant, whereas the diameters of the circular bases of the said truncated portion vary within fractions of millimetres. It follows herefrom that the diameter of the cylindrical portion of the central perforation,  $a^1$ , (that is to say the diameter of the aperture available for the passage of steam) also varies within fractions of millimetres, together with the diameter of the smallest of the before mentioned circular bases. In the axial line of the central perforation,  $a^1$ , within a suitably constructed stuffing-box,  $a^3$ , is arranged a spindle  $a^4$  screw-threaded for part of its length at a very gently sloping pitch, and having a hand-wheel  $a^5$  mounted upon its upper part, while its lower portion terminates in a cone  $a^6$ , the apex of which presents the same constant angle as that pertaining to the truncated portion of the said central perforation,  $a^1$ ; so that the said cone  $a^6$ , when sufficiently lowered, may exactly fit the outline of the said truncated portion, whichever of the interchangeable plugs may be in use.

By these means, when, as the result of preliminary trial, a particular plug has been selected whose reduced orifice corresponds to the supply of steam required for a given heating apparatus, it will be seen that, if the cone  $a^6$  be fully raised, the passage available for steam is that which corresponds to the maximum amount of such steam that can be condensed by the said heating apparatus; also that, when the said cone  $a^6$  is lowered more or less, the available passage referred to is reduced to more or less narrow limits, and may indeed be entirely closed if desired.

[Price 8d.]

*Improved Means applicable for Use in the Distribution of Steam for Heating Purposes.*

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we claim:—

1. The improved means applicable for use in connection with the distribution of steam for heating purposes, arranged and operating substantially as described with reference to the accompanying drawings.
2. The improved device constructed substantially as herein described, and comprising a partitioned casing adapted to receive any one of a series of interchangeable plugs, each of the latter having a passage partly of cylindrical shape and partly in the form of a truncated cone; the several plugs differing from each other in respect of sectional area of passage, and an adjustable spindle, formed with a conical end, serving, in conjunction with any one of the said series of plugs, to regulate and control the passage of steam.

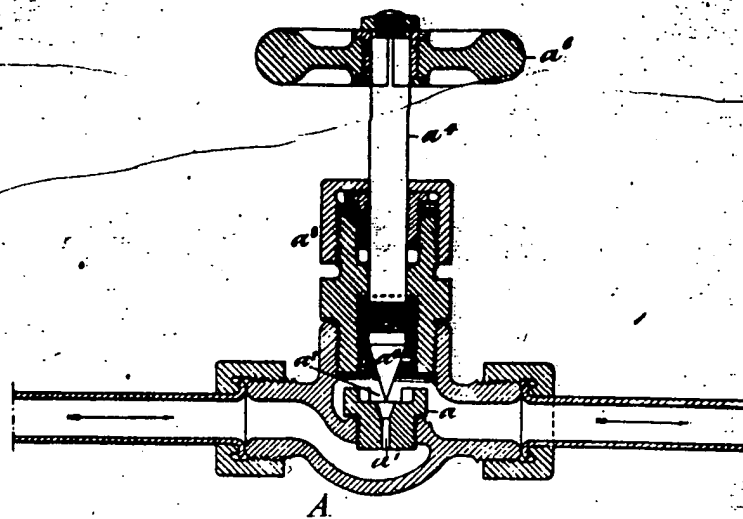
Dated this 10th day of January 1898.

For the Applicants,  
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*Fig. 1*  
*360*

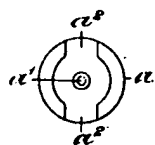
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*[This drawing is a reproduction of the Original on a reduced scale]*